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NEWS 7 JUL 09 PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields
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NEWS 9 JUL 27 CA/CPlus enhanced with new citing references
NEWS 10 JUL 16 GBFULL adds patent backfile data to 1855
NEWS 11 JUL 21 USGENE adds bibliographic and sequence information
NEWS 12 JUL 28 EPFULL adds first-page images and applicant-cited references
NEWS 13 JUL 28 INPADOCDB and INPAFAMDB add Russian legal status data
NEWS 14 AUG 10 Time limit for inactive STN sessions doubles to 40 minutes
NEWS 15 AUG 17 CAS REGISTRY, the Global Standard for Chemical Research, Approaches 50 Millionth Registration Milestone
NEWS 16 AUG 18 COMPENDEX indexing changed for the Corporate Source (CS) field
NEWS 17 AUG 24 ENCOMPPLIT/ENCOMPPLIT2 reloaded and enhanced
NEWS 18 AUG 24 CA/CPlus enhanced with legal status information for U.S. patents

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FILE COVERS 1907 - 27 Aug 2009 VOL 151 ISS 9
FILE LAST UPDATED: 26 Aug 2009 (20090826/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/Cplus family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

=> s astaxanthin and (caprylic or octanoic or decanoic or capric)
3713 ASTAXANTHIN
64 ASTAXANTHINS
3718 ASTAXANTHIN
(ASTAXANTHIN OR ASTAXANTHINS)
7908 CAPRYLIC
14669 OCTANOIC

10445 DECANOIC
 1 DECANOICCS
 10445 DECANOIC
 (DECANOIC OR DECANOICS)
 6631 CAPRIC
 L1 19 ASTAXANTHIN AND (CAPRYLIC OR OCTANOIC OR DECANOIC OR CAPRIC)

=> d 11 1-9 ibib abs

L1 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2009:62711 CAPLUS
 TITLE: Multiresidue analysis of pesticides in animal and
 fishery products by NCI mode GC/MS and dual-column
 GC-micro ECD
 AUTHOR(S): Ueno, Eiji; Kabashima, Yuka; Oshima, Harumi; Ohno,
 Tsutomu
 CORPORATE SOURCE: Aichi Prefectural Institute of Public Health, Nagoya,
 462-8576, Japan
 SOURCE: Shokuhin Eiseigaku Zasshi (2008), 49(6), 390-398
 PUBLISHER: CODEN: SKEZAP; ISSN: 0015-6426
 DOCUMENT TYPE: Nippon Shokuhin Eisei Gakkai
 Journal
 LANGUAGE: Japanese
 AB A sensitive and quant. multiresidue method using NCI mode GC/MS and
 GC-micro ECD for determining pesticides in animal and fishery products was
 established. The crude sample extract obtained by acetone-hexane extraction
 for solid samples or acetonitrile extraction for liquid samples was cleaned up
 with a
 GPC/SPE system. The first GPC pesticide fraction containing lipids and
 pigments was selectively collected, and loaded directly onto a graphitized
 carbon/PSA 2-layered column. After the second GPC pesticide fraction was
 collected, the 2-layered column was eluted with acetone-hexane (3:7). The
 combined eluate was subjected to NCI-SIM/Scan mode GC/MS for
 semi-quantification. After fractionation by Florisil cartridge column
 SPE, each fraction was subjected to dual-column GC-micro ECD for
 quantification. Average recoveries (n = 5) of pesticides, except for
 chlorothalonil and some others, from fortified samples ranged from 76.8%
 to 107.9% with RSD values of <9.7%.

L1 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2008:1155669 CAPLUS
 DOCUMENT NUMBER: 149:408949
 TITLE: Cationic latex as a carrier for active ingredients and
 methods for making and using the same
 INVENTOR(S): Krishnan, Venkataram
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 36pp., Cont.-in-part of U.S.
 Ser. No. 895541.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20080233062	A1	20080925	US 2008-116006	20080506
US 20080057049	A1	20080306	US 2007-895541	20070824
PRIORITY APPLN. INFO.:			US 2006-839973P	P 20060824
			US 2007-895541	A2 20070824

AB This invention relates to the field of polymeric materials that can be used in combination with a wide variety of substrates, such as textiles, metal, cellulosic materials, plastics, and the like, and to the field of active agents including, for example, antimicrobial, antibacterial, and antifungal materials. This invention further relates to latex polymer coatings that comprise at least one active component as well as methods for making and using such latex compnps. Thus, deodorant composition was prepared comprising DC245 fluid 49.30%, Bentone gel VS-5/PC 13.50%, Puresyn 4 10.0%, Asensa CL 110 1.0%, Cabosil M5 0.2%, Reach AZP 908 SUF 24.0%, and dipropylene glycol 2.0%.

L1 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2008:803607 CAPLUS
 DOCUMENT NUMBER: 149:330479
 TITLE: Enzymatic synthesis of astaxanthin n-octanoic acid esters
 AUTHOR(S): Nakao, Masahiro; Sumida, Motoo; Katano, Kenji; Fukami, Harukazu
 CORPORATE SOURCE: Institute for Advanced Technology, Technological Development Center, Suntory Ltd., 5-2-5, Yamazaki, Shimamoto-cho, Mishima-gun, Osaka, 618-0001, Japan
 SOURCE: Journal of Oleo Science (2008), 57(7), 371-374
 PUBLISHER: CODEN: JOSOAP; ISSN: 1345-8957
 DOCUMENT TYPE: Japan Oil Chemists' Society
 LANGUAGE: Journal English

AB The enzymic synthesis of astaxanthin n-octanoic acid esters was examined. Carriers for the immobilized enzyme and reaction conditions such as water content, reaction temperature, and time were examined using *Candida cylindracea* lipase (Lipase OF). Lipase OF immobilized by a hydrophobic anion exchange resin (10% weight/weight content of lipase) gave the best yield in the esterification reaction of astaxanthin. Two milligrams of astaxanthin per 750 μ L tri-n-octanoic (ca. 0.3%) was optimum because of the low solubility of tri-n-octanoic. The esters were obtained in a yield of 36.4% under the optimal reaction conditions.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
 (1 CITINGS)
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2008:770132 CAPLUS
 DOCUMENT NUMBER: 149:106640
 TITLE: Polyglycerin fatty ester-containing screen inks and pressure-sensitive transfer sheets printed therewith
 INVENTOR(S): Iida, Yasuharu; Higo, Sachiko; Furukawa, Kunihiro
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9pp.
 DOCUMENT TYPE: CODEN: JKXXAF
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: 1 Japanese

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008143992	A	20080626	JP 2006-331364	20061208
PRIORITY APPLN. INFO.:			JP 2006-331364	20061208

AB Title screen inks, capable of printing on food, are prepared by mixing 60-90 parts dispersions of colored edible dyes and white edible dyes in heat-meltable compns. comprising polyglycerin fatty esters, hydrogenated vegetable oils, and edible waxes with 10-40 parts H₂O at 50-70°, and emulsifying. Title pressure-sensitive transfer sheets are prepared by printing 50-90 µm-thick substrates with the screen inks at thickness 5-20 µm (as dried coating). Thus, bleached paper for food was screen-printed with an ink containing caprylic capric triglycerides, hexaglycerin ricinoleate, hydrogenated soybean oil, beeswax, Japan Red 40 Al lake, and CaCO₃ to give a pressure-sensitive transfer sheet showing good blocking resistance and no curling nor delamination.

L1 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 20071207105 CAPLUS

DOCUMENT NUMBER: 147:454810

TITLE: External compositions containing redox catalysts, oxidoreductase, and/or reducing agents

INVENTOR(S): Yanagi, Kotaro

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19pp.

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007277212	A	20071025	JP 2006-127932	20060404
PRIORITY APPLN. INFO.:			JP 2006-127932	20060404

AB The invention relates to an external composition, especially an anti-wrinkle, skin-whitening, anti-acne, anti-aging, and skin barrier function-improving cosmetic composition, wherein the composition is characterized by containing at least two components selected from a metal redox catalyst, an oxidoreductase, and a reducing agent. The components activates biol. tissue or bioactive agent through the reducing effect. The components may be immobilized on the surface of carrier particles. For example, crystallized subtilisin was crosslinked with protein through glutaraldehyde to stabilize. The crystal was mixed with platinum colloid in 0.5 % xanthan gel at 10 and 0.1 %, resp., and further mixed with L-ascorbic acid-2-phosphate ester-6-palmitate (3 %), fullerene C60 (1 %), and preservative (2 %). The gel composition showed higher keratolytic effect as compared with glycolic acid cream on human skin. Also, an emulsion composition containing the gel composition 0.0001-10 % with other ingredients was formulated.

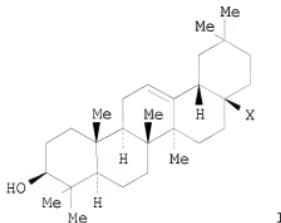
L1 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:754507 CAPLUS

DOCUMENT NUMBER: 147:142356

TITLE: β -Amyrin fatty acid derivatives inhibiting production of inflammatory cytokines, their uses as inflammation inhibitors, and food and cosmetics containing them
 INVENTOR(S): Nimura, Yoshihiro
 PATENT ASSIGNEE(S): Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 42pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007176816	A	20070712	JP 2005-374630	20051227
PRIORITY APPLN. INFO.:			JP 2005-374630	20051227
GI				



I

AB Title esters I (X = stearic acid, palmitic acid, eicosapentaenoic acid, docosahexaenoic acid, docosapentaenoic acid, octanoic acid, decanoic acid, γ -linoleic acid) inhibit production of inflammatory cytokines and are useful as inflammation inhibitors with slight adverse reactions. Also claimed are food and cosmetics containing I, astaxanthin, and *Diospyros kaki* leaf extract-containing soybean oil at predetd. concns. Thus, *Chrysanthemum morifolium* flower was ground, treated with eicosapentaenoic acid in the presence of Lipase AY Amano at 26° for 13 h, mixed with sep. prepared *Diospyros kaki* leaf extract-containing soybean oil, and the oil phase was separated. The oil phase containing

I (X = eicosapentaenoic acid) suppressed Japanese cedar pollen-induced interleukin-1 α production by monocytes derived from pollinosis patients.

L1 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2006:1287293 CAPLUS
 DOCUMENT NUMBER: 147:166496
 TITLE: Chemical synthesis of astaxanthin n-octanoic acid monoester and diester and

AUTHOR(S): Fukami, Harukazu; Namikawa, Koshi; Sugiura-Tomimori, Naminou; Sumida, Motoo; Katano, Kenji; Nakao, Masahiro
 CORPORATE SOURCE: Department of Bioscience and Biotechnology, Faculty of Bioenvironmental Science, Kyotogakuen University, 1-1 Nanjyo, Sogabe-cho, Kameoka-city, Kyoto, 621-8555, Japan
 SOURCE: Journal of Oleo Science (2006), 55(12), 653-656
 PUBLISHER: CODEN: JOSOAP; ISSN: 1345-8957
 DOCUMENT TYPE: Japan Oil Chemists' Society
 LANGUAGE: Journal
 OTHER SOURCE(S): English
 AB We chemical synthesized astaxanthin n-octanoic acid monoester and diester from free astaxanthin and n-octanoic acid by a dehydration reagent in 32 and 22% yield, resp. The oral absorbability of the n-octanoic acid monoester and diester was evaluated by examining the plasma and liver concns. of astaxanthin after oral administration of the compds. The monoester significantly increased the plasma and liver concentration of astaxanthin compared with the long-chain fatty acid ester mixture derived from Haematococcus algae. The diester is inclined to increase it although it is not significant. It is possible that medium-chain fatty acid esters give better oral-absorbability of astaxanthin than long-chain fatty acid esters.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2006:1219315 CAPLUS
 DOCUMENT NUMBER: 146:44433
 TITLE: Carotenoids in *Solenocera indica* and *Aristeus alcocki*, deep-sea shrimp from Indian waters
 AUTHOR(S): Manjabhat, Sachindra Nakkarike; Narayan, Bhaskar; Subbanna, Mahendrakar Namdev
 CORPORATE SOURCE: Department of Meat, Fish, and Poultry Technology, Central Food Technological Research Institute, Mysore, 570 013, India
 SOURCE: Journal of Aquatic Food Product Technology (2006), 15(2), 5-16
 PUBLISHER: CODEN: JAFPE5; ISSN: 1049-8850
 DOCUMENT TYPE: Food Products Press
 LANGUAGE: Journal
 English

AB Carotenoids are the major pigments responsible for the color of crustaceans like shrimp. Quant. and qual. distribution of carotenoids in different body components of deep-sea shrimp *Solenocera indica* and *Aristeus alcocki*, from Indian waters were assessed. The yield of waste (head and carapace) from processing of these shrimp ranged from 62.6-65.6%. Carotenoid content was higher in *A. alcocki* and the highest total carotenoid content of 185.3 μ g/g was observed in head of *A. alcocki*. Astaxanthin and its mono- and diesters (63.5-92.2%) were the major carotenoids in both the species of shrimp and the levels of esterified astaxanthin were higher than the free form of astaxanthin. The levels of astaxanthin esters were higher (61.7-70.8%) in

A. alcocki compared to S. indica (43.8-58.4%). Highest unsatd. fatty acid content (60.5%) was observed in the carotenoid extract from head of A. alcocki, and the highest saturated fatty acid content (83.1%) was observed in the carotenoid extract from the carapace.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:161417 CAPLUS
 DOCUMENT NUMBER: 142:279029
 TITLE: Carotenoids in crabs from marine and fresh waters of India
 AUTHOR(S): Sachindra, N. M.; Bhaskar, N.; Mahendrakar, N. S.
 CORPORATE SOURCE: Department of Meat, Fish and Poultry Technology, Central Food Technological Research Institute, Mysore, 570 013, India
 SOURCE: LWT--Food Science and Technology (2005), 38(3), 221-225
 CODEN: LSTWB3
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Quant. and qual. distribution of carotenoids in meat and shell of major marine crab (*Charybdis cruciata*) and fresh water crab (*Potamon potamon*) from Indian waters was assessed. The total carotenoid content was low in both species of crabs analyzed, highest being 11.0 µg/g in shell of marine crab. Thin-layer chromatog. (TLC) and high-performance liquid chromatog. (HPLC) of carotenoid exts. indicated that the marine crab contained astaxanthin and its esters as major carotenoids and zeaxanthin was major carotenoid in fresh water crab extract. Astaxanthin and its esters contributed 67.6 and 65.5 g/100 g of total carotenoids in meat and shell of marine crab. The zeaxanthin content (g/100 g) in the carotenoid extract of meat and shell of fresh water crab was 42.0 and 74.8 of total carotenoids. The carotenoid exts. from both the crabs had higher level of unsatd. fatty acids. Oleic acid (C18:1) and palmitoleic acid (C16:1) were the predominant unsatd. fatty acid in carotenoid extract from meat of marine and fresh water crab, resp. In the carotenoid extract from shell, eicosenoic acid (C20:1) in marine crab and linolenic acid (C18:3) in fresh water crab were the major unsatd. fatty acids.
 OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
 REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L1 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:19691 CAPLUS
 DOCUMENT NUMBER: 142:133344
 TITLE: Carotenoids in different body components of Indian shrimps
 AUTHOR(S): Sachindra, Nakkarike M.; Bhaskar, Narayan; Mahendrakar, Namadev S.
 CORPORATE SOURCE: Department of Meat, Fish and Poultry Technology, Central Food Technological Research Institute, Mysore,

SOURCE: 570 013, India
 Journal of the Science of Food and Agriculture (2005),
 85(1), 167-172
 CODEN: JSFAAE; ISSN: 0022-5142

PUBLISHER: John Wiley & Sons Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The quant. and qual. distribution of carotenoids in different body components of 4 species of shrimp (*Penaeus monodon*, *Penaeus indicus*, *Metapenaeus dobsonii*, and *Parapenaeopsis stylifera*) harvested from shallow waters off the Indian coast was assessed. The highest total carotenoid contents were observed in the head (153.1 $\mu\text{g g}^{-1}$) and carapace (104.7 $\mu\text{g g}^{-1}$) of *P. stylifera*, while the body components of *P. indicus* showed the lowest carotenoid levels. Astaxanthin and its mono- and diesters were the major carotenoids (63.5-92.2% of total carotenoids) present in the carotenoid exts. from the shrimps, while the exts. contained low levels of β -carotene and zeaxanthin. The major fatty acids in the carotenoid exts. were palmitic, heptadecanoic, palmitoleic, stearic, and oleic acids.

OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
 REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:404819 CAPLUS
 DOCUMENT NUMBER: 141:189706
 TITLE: Sugar ester synthesis by a mycelium-bound *Mucor circinelloides* lipase in a micro-reactor equipped with water activity sensor
 AUTHOR(S): Antczak, Tadeusz; Patura, Justyna; Szczesna-Antczak, Miroslawa; Hiler, Dariusz; Bielecki, Stanislaw
 CORPORATE SOURCE: Institute of Technical Biochemistry, Technical University of Lodz, Lodz, 90-924, Pol.
 SOURCE: Journal of Molecular Catalysis B: Enzymatic (2004), 29(1-6), 155-161
 CODEN: JMCEB8; ISSN: 1381-1177
 PUBLISHER: Elsevier Science B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 141:189706

AB The mycelium-bound *Mucor circinelloides* lipase was used for the synthesis of esters of saccharides and fatty acids in 37 mL reactor equipped with magnetic stirrer and water activity sensor. Either di-n-pentyl ether or the mixture of di-n-pentyl and petroleum ethers were applied as reaction media. Water activity sensor provided online monitoring of this parameter and control of continuous processes of ester synthesis. It was found that two natural antioxidants, i.e. carotene and astaxanthin activated this lipase in organic solvents that could be beneficial for the synthesis of esters of compds. sensitive to oxidation, e.g. polyunsatd. fatty acids.

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
 REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:892745 CAPLUS
 DOCUMENT NUMBER: 139:363710
 TITLE: Astaxanthin medium-chain fatty acid ester
 manufacture by enzymic transesterification and
 esterification
 INVENTOR(S): Sumida, Motoo; Nakao, Masahiro; Tomimori, Namino;
 Namikawa, Koshi; Fukami, Harukazu
 PATENT ASSIGNEE(S): Suntory Limited, Japan
 SOURCE: PCT Int. Appl., 49 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093229	A1	20031113	WO 2003-JP5443	20030428
W: AU, CA, CN, ID, IL, JP, KR, SG, US				
RN: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
CA 2481704	A1	20031113	CA 2003-2481704	20030428
AU 2003234765	A1	20031117	AU 2003-234765	20030428
EP 1500645	A1	20050126	EP 2003-728006	20030428
EP 1500645	B1	20090715		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1649839	A	20050803	CN 2003-809532	20030428
CN 100374417	C	20080312		
SG 150385	A1	20090330	SG 2006-7508	20030428
US 20050228188	A1	20051013	US 2004-511829	20041020
PRIORITY APPLN. INFO.:			JP 2002-128989	A 20020430
			WO 2003-JP5443	W 20030428

AB An astaxanthin medium-chain fatty acid ester (I) useful for manufacturing food, cosmetic, and drug has better bioavailability and movement in liver than that of the previously known astaxanthin long-chain fatty acid esters. I is prepared by enzymic transesterification with a lipase between the astaxanthin long-chain fatty acid esters and medium-chain fatty acid or glycerides, or enzymic esterification of astaxanthin. Manufacture of astaxanthin mono- and diester of octanoic acid with lipase of *Candida* was shown.

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
 REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:888445 CAPLUS
 DOCUMENT NUMBER: 137:375344
 TITLE: Two-part disinfecting system
 INVENTOR(S): Morelli, Joseph; Warf, C. Cayce, Jr.; Aldrich, Maura; Morse, Cecilia Moser; Wiley, Jean
 PATENT ASSIGNEE(S): Alcide Corporation, USA
 SOURCE: PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002091832	A1	20021121	WO 2002-US15303	20020515
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RN: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 6524624	B1	20030225	US 2001-859902	20010516
AU 2002308724	A1	20021125	AU 2002-308724	20020515
EP 1401280	A1	20040331	EP 2002-769742	20020515
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2001-859902 A 20010516
 WO 2002-US15303 W 20020515

AB The two-part disinfecting system contains a first part and a second part adapted to be mixed to yield an aqueous disinfecting composition, wherein the first

part comprises a chlorite and the second part comprises an acid and an oxidizable colorant, and wherein the first and/or second part comprise an α -olefin sulfonate. When the two parts are mixed, the resulting disinfectant composition shows reduced chlorine dioxide generation and extended color longevity.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2008:821281 CAPLUS
 DOCUMENT NUMBER: 134:146440
 TITLE: Activity of immobilised in situ intracellular lipases from *Mucor circinelloides* and *Mucor racemosus* in the synthesis of sucrose esters
 AUTHOR(S): Antczak, T.; Hiler, D.; Krystynowicz, A.; Szczesna, M.; Bleicki, S.; Galas, E.
 CORPORATE SOURCE: Institute of Technical Biochemistry, Technical University of Lodz, Lodz, 90-924, Pol.
 SOURCE: Progress in Biotechnology (2000), 17(Food Biotechnology), 221-227
 CODEN: FBITE3; ISSN: 0921-0423
 PUBLISHER: Elsevier Science B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 134:146440

AB The activity of intracellular, immobilized in situ lipases from *Mucor circinelloides* and *Mucor racemosus* can be changed by means of chemical modifications of the reaction milieu, using some substances isolated from *Mucor* cells. The substances act ambivalently (as activators or

inhibitors) on the lipases. The yield of sucrose monopalmitate synthesis and the time to reach the reaction equilibrium state were determined in mono- and

biphasic systems. The investigations proved that in a milieu of di-n-pentyl ether saturated with water, 92% of sucrose was esterified, and the location of the lipase on the interface between the phases, markedly diminished the time equilibrium to reach.

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:756471 CAPLUS

DOCUMENT NUMBER: 133:295730

TITLE: Pigment [astaxanthin diester-based for feeding salmonids]

INVENTOR(S): Breivik, Harald; Sanna, Lola Irene; Aanesen, Berit Annie

PATENT ASSIGNEE(S): Norsk Hydro Asa, Norway

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000062625	A1	20001026	WO 2000-NO129	20000417
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NO 9901857	A	20001020	NO 1999-1857	19990419
NO 309386	B1	20010122		
CA 2369800	A1	20001026	CA 2000-2369800	20000417
EP 1171002	A1	20020116	EP 2000-921189	20000417
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 759161	B2	20030410	AU 2000-41532	20000417
RU 2237072	C2	20040927	RU 2001-130983	20000417
US 6709688	B1	20040323	US 2002-9595238	20020204
PRIORITY APPLN. INFO.:			NO 1999-1857	A 19990419
			WO 2000-NO129	W 20000417

AB This invention relates to a new pigment in feed for salmonids, a new feed comprising this pigment and use of this pigment. The pigment comprises a diester of astaxanthin prepared with an omega-3 fatty acid and/or a short chain carboxylic acid. By this invention a pigment for feed to salmonides that is more stable and biol. more effective than free astaxanthin and com. available astaxanthin products, is provided.

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD

(6 CITINGS)

L1 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1968:19920 CAPLUS
 DOCUMENT NUMBER: 68:19920
 ORIGINAL REFERENCE NO.: 68:3795a,3798a
 TITLE: Secondary carotenoids of the green alga, *Sphaeroplea*
 AUTHOR(S): Kleinig, Hans
 CORPORATE SOURCE: Univ. Heidelberg, Heidelberg, Fed. Rep. Ger.
 SOURCE: Zeitschrift fuer Naturforschung, Teil B: Anorganische
 Chemie, Organische Chemie, Biochemie, Biophysik,
 Biologie (1967), 22(9), 977-9
 CODEN: ZENBAX; ISSN: 0044-3174
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB The carotenoids of the zygospores of *S. cambrica* were extracted and separated by column chromatog. on kieselguhr. The carotenoids in the fractions obtained from the column were characterized by thin-layer chromatog., chemical tests, and spectroscopy. The carotenoids and the percent of each in the total were hydroxyechinone (3-hydroxy-4-oxo- β -carotene) 2%, adonixanthin (3,3'-dihydroxy-4,4'-dioxo- β -carotene) 21%, adonirubin (3-hydroxy-4,4'-dioxo- β -carotene) 4%, and astaxanthin (3,3'-dihydroxy-4,4'-dioxo- β -carotene) 68%, which were esterified with myristic, lauric, and capric acids through the hydroxyl groups, echinenon (4-oxo- β -carotene) 2%, and canthaxanthin (4,4'-dioxo- β -carotene) 3%. Chlorophyll and primary carotenoids such as α -carotene and β -carotene were not detected.

L1 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1967:112942 CAPLUS
 DOCUMENT NUMBER: 66:112942
 ORIGINAL REFERENCE NO.: 66:20971a,20974a
 TITLE: Ketocarotenoids from *Adonis annua*. II. Ester structures
 AUTHOR(S): Egger, Kurt; Kleinig, Hans
 CORPORATE SOURCE: Univ. Heidelberg, Heidelberg, Fed. Rep. Ger.
 SOURCE: Phytochemistry (Elsevier) (1967), 6(3), 437-40
 CODEN: PYTCAS; ISSN: 0031-9422
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB cf. CA 63, 15223g. The fatty acid compds. of the ketocarotenoid esters in the petals of *A. annua* (esters of astaxanthin, 3-hydroxyechinone, 3,3'-dihydroxyechinone, and 3-hydroxycanthaxanthin) were identified as myristic (main compound), palmitic, lauric, and capric acids. An unsatd. fatty acid is present in a minor concentration 12 references.

L1 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1961:65684 CAPLUS
 DOCUMENT NUMBER: 55:65684
 ORIGINAL REFERENCE NO.: 55:12543b-d
 TITLE: Lipides of *Ankistrodesmus braunii*
 AUTHOR(S): Williams, Virginia R.; McMillan, Rosamond
 CORPORATE SOURCE: Louisiana State Univ., Baton Rouge
 SOURCE: Science (Washington, DC, United States) (1961), 133, 459-60

CODEN: SCIEAS; ISSN: 0036-8075

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. CA 52, 5542h. The cellular lipides of *A. braunii*, grown to stationary phase on a chemical defined medium, were analyzed. The lipide content varied from 18 to 73% (dry weight), depending on age and methods of analysis. The pigments of the nonsaponifiable fraction were separated by adsorption chromatography and counter current extraction and tentatively identified as β -carotene, astaxanthin, lutein, and possibly a derivative of neoxanthin. The correct spectra and solubility were obtained for the 1st 3. The fatty acid fraction was converted to the corresponding Me esters and analyzed by gas chromatography. The principal fatty acids present were: palmitic, oleic, and linolenic acids. Traces were detected of caprylic, capric, lauric, and palmitoleic acids.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L1 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1938:64637 CAPLUS

DOCUMENT NUMBER: 32:64637

ORIGINAL REFERENCE NO.: 32:9053f-i,9054a-h

TITLE: Astaxanthin and ovooverdin

AUTHOR(S): Kuhn, Richard; Sorensen, Nils A.

SOURCE: Berichte der Deutschen Chemischen Gesellschaft
[Abteilung] B: Abhandlungen (1938), 71B, 1879-88

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB The green chromoprotein (I) in the eggs of *Astacus gammarus* is easily decomposed by alc., acetone, dilute acids or heat into a red pigment (II) which with alc. KOH gives astacin (III) (C. A. 27, 3530; 28, 217.1; Karrer and Hubner, C. A. 30, 6387.5). An interesting question was how combination of a red carotenoid with a colorless protein component can give a deep blue-green chromoprotein. II, originally designated ovo ester, is not an ester but a hydroxylated carotenoid C40H52O4, i. e., a xanthophyll, and it is accordingly called astaxanthin. It differs from III in containing 4 more H atoms. In alkaline solution it uses up exactly 2 mols. O, smoothly giving III: II + 20 = III + 2H2O2. If O is strictly excluded, no trace of III is formed. The process hitherto thought to be a saponification is therefore really an autoxidation. On the

basis of the triketo- β -carotene structure for III which the work of Karrer and his colleagues has made very probable, it may be concluded that II contains 2 secondary alc. groups in the place of 2 of the ketone groups in III. The HO groups can readily be detected by esterification. No tetraesters could be prepared; the keto groups in II do not enolize under the same conditions as those in III. With MeMgI II gives only 2 mols. CH4 and its diacetate shows no active H at 20°. The absence of CH2 groups next to the CO groups would explain why, unlike III, the distribution of II between benzene and aqueous MeOH is not influenced by dilute NaOH. It is very probable that the 2 CO groups are in conjugation with the polyene chain. II would then be a 5,5'-dihydroxy-4,4'-diketo- β -carotene. Whereas III has only 1 homogeneous absorption band, II and its esters show 3 distinct maximum in the visible region. When O is strictly excluded, II gives deep blue alkali salts. If air is admitted the color immediately changes to red and III is

formed. The phenomenon is similar to the formation of the orange K stilbenediolate (IV) from benzoin and K alcoholate. The blue salts are probably formed by double enolization and have the structure (R = polyene chain). They have not been isolated in analyzable form but on decomposition with dilute H₂SO₄ in a high vacuum they give II exclusively. Ovooverdin (I) is also assumed to be an analog of IV and is assigned a structure similar to that above, with basic groups of the protein component replacing the K atoms. This would explain its blue-green color. Unlike the blue salts, however, it is not autoxidizable; this is believed to be due to the fact that the protein is present not only in salt-like combination but that, as in the formation of flavoproteins and flavophosphoproteins, forces come into play which effect a sp., relatively firm "anchoring" of the pigment to the protein. From sedimentation studies of hardly purified solns. of I from the eggs. of Homarus americanus, Wyckoff (C. A. 31, 8568.6) obtained values corresponding to a mol. weight of about 300,000. The question was whether with increasing purification the ratio of II to protein in I would approach the value 1:500 corresponding to such a mol. weight. With fresh eggs. of North Sea lobsters as starting material, the content of II, after cleavage of the protein fraction with pyridine, was determined calorimetrically in a step photometer. The protein content was determined by precipitation with tannin (C. A. 32, 202.2) and Kjeldahl N detns. on the ppts. The I was purified by fractional adsorption on Al(OH)₃ and fractional elution with Na₂HPO₄ or 40%-saturated (NH₄)₂SO₄ under N in a refrigerator. There were thus obtained products with a constant ratio II: protein of 1:242. The absorption spectrum did not change during the course of the purification. The mol. weight determined in this way is therefore around 144,000. The epiphase pigments

in the red epidermis of the lobster, hitherto considered to be esters of III, are really esters of II, for when the saponification is effected in the complete absence of air there are obtained the characteristic deeply colored salts of II which are instantly dehydrogenated to the tetraketone only when air is admitted. The chromoproteins also yield the double α -ketol with heat or dilute acids. The pigment of the boiled lobster is therefore II, not III. This is probably true of all Crustacea insofar as putrefaction or other factors have not set up an alkaline reaction which makes possible autoxidation to the tetraketone on boiling. II, m. 215-16° (decomposition), α 672.5 ± 0.03° (7.22 mg. in 10 cc. pyridine, 1 2 dm.). Diacetate, deep blue-black, m. 203-5° (evacuated tubes, Berl block), goes into the lower layer in distribution tests between 90% MeOH and benzine. Dicaprylate, dark red, m. 121-4° (in vacua, Berl block); only very little can be shaken out of benzine with 95% MeOH and less than half with 90% MeOH, but with 97% MeOH most of the pigment goes into the lower layer. Dipalmitate, violet-red, m. 71.5-2.5°.

=> d his

(FILE 'HOME' ENTERED AT 11:58:52 ON 27 AUG 2009)

FILE 'CAPLUS' ENTERED AT 11:59:18 ON 27 AUG 2009
L1 19 S ASTAXANTHIN AND (CAPRYLIC OR OCTANOIC OR DECANOIC OR CAPRIC)

=> log off
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

Serial No.: 10/511829_F

STN INTERNATIONAL LOGOFF AT 12:09:17 ON 27 AUG 2009